

# **CLAIM AMENDMENTS**

## **Claim Amendment Summary**

### **Claims pending**

- Before this Amendment: Claims 1-20 and 22-26.
- After this Amendment: Claims 1-20 and 22-26.

**Non-Elected, Canceled, or Withdrawn claims:** None.

**Amended claims:** 1, 9, 14, 16, 20, and 22.

**New claims:** None.

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## **Claims:**

**1. (Currently Amended)** A computer storage media having processor-executable instructions that, when executed by a processor, performs a method comprising:

receiving, by head-end equipment from a content provider, a digital television (DTV) application and its associated metadata, wherein the receiving is facilitated by an asset definition interface;

generating, by the head-end equipment, an application information table for conveying application signaling information to a DTV receiving unit, the application information table being generated based on the associated metadata;

generating, by the head-end equipment, a data grouping having the application information table signaling information, ~~wherein the information is based upon the metadata associated with the DTV application;~~

sending, by the head-end equipment, a transmission to ~~[[a]]~~ the DTV receiving unit, wherein such transmission comprises the data grouping, whereby the application signaling information is used by the DTV receiving unit to discover and launch the DTV application,

wherein the head-end equipment, the content provider, and the DTV receiving unit are each separate and distinct from each other.

**2. (Previously Presented)** A computer storage media as recited in claim 1, wherein the method further comprises storing, by the head-end equipment, the DTV application and its associated metadata.

**3. (Previously Presented)** A computer storage media as recited in claim 1, wherein the method further comprises constructing and formatting, by the head-end equipment, a DTV data service transmission which comprises the DTV application.

**4. (Previously Presented)** A computer storage media as recited in claim 1, wherein the method further comprises generating, by the head-end equipment, a content referencing identifier for the DTV application.

**5. (Previously Presented)** A computer storage media as recited in claim 1, wherein the associated metadata comprises a data structure embodied on the computer storage media, the structure having fields comprising:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application.

**6. (Previously Presented)** A computer storage media as recited in claim 1, wherein the associated metadata comprises a data structure

embodied on the computer storage media, the structure having fields consisting of:

- an application identifier field for identifying the DTV application;
- an originator identifier field for identifying the originator of the DTV application;
- an application-type field for indicating a type of the DTV application;
- a visibility field for indicating the degree of control a user has over the DTV application; and
- a rating field for indicating a rating of the DTV application.

**7. (Previously Presented)** A computer storage media as recited in claim 1, wherein the associated metadata comprises a data structure embodied on the computer storage media, the structure having one or more fields selected from a group consisting of:

- an application identifier field for identifying the DTV application;
- an originator identifier field for identifying the originator of the DTV application;
- an application-type field for indicating a type of the DTV application;
- a visibility field for indicating the degree of control a user has over the DTV application; and
- a rating field for indicating a rating of the DTV application.

**8. (Previously Presented)** A computer storage media as recited in claim 1, wherein the associated metadata comprises a data structure having

fields selected from a group consisting of:

- an application identifier field for identifying the DTV application;
- an originator identifier field for identifying the originator of the DTV application;
- an application-type field for indicating a type of the DTV application;
- a profile field for indicating a minimum profile of a system on which the DTV application will execute;
- a visibility field for indicating the degree of control a user has over the DTV application;
- a permission field for denoting "sandbox" security permission of the DTV application; and
- a rating field for indicating a rating of the DTV application.

**9. (Currently Amended)** A computer storage media having processor-executable instructions that, when executed by a processor, performs a method comprising:

receiving, by a digital television unit from head-end equipment, a transmission which includes an application information table conveying application signal information about a digital television (DTV) application, wherein metadata associated with the DTV application facilitates management and generation of the application information table ~~signal information~~ within the head-end equipment;

presenting a user interface (UI) configured to inform a user about the DTV application, wherein contents of the UI are based upon the received application

signal information.

**10. (Previously Presented)** A computer storage media as recited in claim 0, wherein the method further comprises receiving user input via the UI.

**11. (Previously Presented)** A computer storage media as recited in claim 0, wherein the application signal information comprises a data structure embodied on a processor-readable medium, having fields selected from a group consisting of:

- an application identifier field for identifying the DTV application;
- an originator identifier field for identifying the originator of the DTV application;
- an application-type field for indicating a type of the DTV application;
- a visibility field for indicating the degree of control a user has over the DTV application; and
- a rating field for indicating a rating of the DTV application.

**12. (Previously Presented)** A computer storage media as recited in claim 0, wherein the application signal information comprises a data structure embodied on a processor-readable medium, the structure having fields comprising:

- an application identifier field for identifying the DTV application;
- an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;  
a visibility field for indicating the degree of control a user has over the DTV application; and  
a rating field for indicating a rating of the DTV application, wherein the metadata drives data insertion equipment at the head-end equipment.

**13. (Previously Presented)** A computer storage media as recited in claim 0, wherein the application signal information comprises a data structure embodied on a processor-readable medium, the structure having fields selected from a group consisting of:

an application identifier field for identifying the DTV application;  
an originator identifier field for identifying the originator of the DTV application;  
an application-type field for indicating a type of the DTV application;  
a profile field for indicating a minimum profile of a system on which the DTV application will execute;  
a visibility field for indicating the degree of control a user has over the DTV application;  
a permission field for denoting "sandbox" security permission of the DTV application; and  
a rating field for indicating a rating of the DTV application, wherein the metadata drives data insertion equipment at the head-end equipment.

**14. (Currently Amended)** A method for managing digital television (DTV) application signaling, the method comprising:

receiving, by head-end equipment from a content provider, a DTV application and its associated metadata, wherein the metadata drives data insertion equipment at the head-end equipment;

constructing and formatting, by the head-end equipment, a DTV data service transmission which comprises the DTV application;

generating, by the head-end equipment, an application information table for conveying application signaling information to a DTV receiving unit, the application information table being generated based on the associated metadata;

generating, by the head-end equipment, a data grouping having the application information table ~~signaling information, wherein the information is based upon the metadata associated with the DTV application;~~

application-signaling, by the head-end equipment, ~~[[a]]~~ the DTV receiving unit via a transmission comprising the data grouping,

wherein the head-end equipment, the content provider, and the DTV receiving unit are each separate and distinct from each other.

**15. (Previously Presented)** A method as recited in claim 0, further comprising provisioning transmission bandwidth, by the head-end equipment, to transmit periodically the application signaling information built for the metadata.



**16. (Currently Amended)** A method as recited in claim 0, wherein the metadata is part of an Extended Asset Definition Interface and is defined to correspond to information an application signaling generator of the head-end equipment needs to generate the application information table.

**17. (Previously Presented)** A method as recited in claim 0, further comprising generating, by the head-end equipment, a content referencing identifier for the DTV application.

**18. (Original)** A method as recited in claim 0, wherein the associated metadata comprises a data structure embodied on a processor-readable medium, the structure having fields comprising:

- an application identifier field for identifying the DTV application;
- an originator identifier field for identifying the originator of the DTV application;
- an application-type field for indicating a type of the DTV application;
- a visibility field for indicating the degree of control a user has over the DTV application; and
- a rating field for indicating a rating of the DTV application.

**19. (Original)** A method as recited in claim 0, wherein the associated metadata comprises a data structure embodied on a processor-readable medium, the structure having one or more fields selected from a group consisting of:

- an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application.

**20. (Currently Amended)** A digital television (DTV) application management system comprising:

a receiving means for receiving a digital television (DTV) application and its associated metadata by head-end equipment from a content provider;

a first generating means, implemented in the head-end equipment, for generating an application information table for conveying application signaling information to a DTV receiving unit, the application information table being generated based on the associated metadata;

a generating means, implemented in the head-end equipment, for generating a data grouping having the application information table signaling information, ~~wherein the information is based upon the metadata associated with the DTV application;~~

a sending means, implemented in the head-end equipment, for sending a transmission to ~~[[a]]~~ the DTV receiving unit, wherein such transmission comprises the data grouping,

wherein the head-end equipment, the content provider, and the DTV receiving unit are each separate and distinct from each other, and

wherein the associated metadata is part of an Extended Asset Definition Interface, is defined to correspond to information an application signaling generator of the head-end equipment needs to generate the application information table, and comprises a data structure embodied on a computer storage media, the structure having one or more fields selected from a group consisting of:

- an application identifier field for identifying the DTV application;
- an originator identifier field for identifying the originator of the DTV application;
- an application-type field for indicating a type of the DTV application;
- a visibility field for indicating the degree of control a user has over the DTV application; and
- a rating field for indicating a rating of the DTV application.

## **21. (Canceled)**

**22. (Currently Amended)** A digital television (DTV) application management system implemented in head-end equipment comprising:

- an asset receiver configured to receive a digital television (DTV) application and its associated metadata from a content provider;
- an application signaling generator configured to generate an application information table for conveying application signaling information to a DTV receiving unit, the application information table being generated based on the associated metadata, and to generate a data grouping having the application

~~information table signaling information, wherein the information is based upon the metadata associated with the DTV application;~~

a transmitter configured to send a transmission to ~~[[a]]~~ the DTV receiving unit, wherein such transmission comprises the data grouping,

wherein the head-end equipment, the content provider, and the DTV receiving unit are each separate and distinct from each other.

**23. (Previously Presented)** A system as recited in claim 0, wherein the associated metadata comprises a data structure embodied on a computer storage media, the structure having fields comprising:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application.

**24. (Previously Presented)** A system as recited in claim 0, wherein the associated metadata comprises a data structure embodied on a computer storage media, the structure having fields consisting of:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;  
a visibility field for indicating the degree of control a user has over the DTV application; and  
a rating field for indicating a rating of the DTV application.

**25. (Previously Presented)** A system as recited in claim 0, wherein the associated metadata comprises a data structure embodied on a computer storage media, the structure having one or more fields selected from a group consisting of:

an application identifier field for identifying the DTV application;  
an originator identifier field for identifying the originator of the DTV application;  
an application-type field for indicating a type of the DTV application;  
a visibility field for indicating the degree of control a user has over the DTV application; and  
a rating field for indicating a rating of the DTV application.

**26. (Original)** A system as recited in claim 0, wherein the associated metadata comprises a data structure having fields selected from a group consisting of:

an application identifier field for identifying the DTV application;  
an originator identifier field for identifying the originator of the DTV application;  
an application-type field for indicating a type of the DTV application;

a profile field for indicating a minimum profile of a system on which the DTV application will execute;

a visibility field for indicating the degree of control a user has over the DTV application;

a permission field for denoting "sandbox" security permission of the DTV application; and

a rating field for indicating a rating of the DTV application.